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10/686,143	10/14/2003	Dominique M. Richard	RMR-0003	6222

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EXAMINER	
DUNHAM, JASON B	

ART UNIT	PAPER NUMBER
3625	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/686,143	**Applicant(s)** RICHARD ET AL.
	Examiner JASON B. DUNHAM	**Art Unit** 3625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2008*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-27* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 28, 2008 has been entered. Applicant amended claims 1, 3, 5, 8, 10, 13, 15, 17, and 19-24 and added claims 25-27. Claims 1-27 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraisser (US 2002/0147654) in view of Mowery (US 5,983,198).

Referring to claim 1. Kraisser discloses a scheduling and routing system for delivering a consumable to customers via commercial delivery vehicles, comprising:

- A delivery forecasting systems that maps certain customers to delivery profiles for similarly situated customers to provide for inventory replenishment of the consumable (Kraisser: abstract and paragraphs 60-61); and

- An integrated inventory replenishment, scheduling, and routing system that generates a delivery route for a commercial delivery vehicle based on forecasts and other variable parameters including road routing economics of making several deliveries in sequence to a plurality of customers before replenishment of the commercial delivery vehicle (Kraisser: paragraph 112).
- Kraisser discloses all of the above but does not explicitly disclose forecasting delivery based risk of inventory depletion of certain customers. Mowery discloses a system for delivering consumables to customers via commercial delivery trucks including generating delivery routes based on customers' delivery profiles and prioritizing delivery of said consumables based on risk of inventory depletion (Mowery: abstract and figures 2 and 4-5). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to have modified the system of Kraisser to have included forecasting delivery based risk of inventory depletion of consumables of certain customers, as taught by Mowery, in order to "optimize the routes, delivery amounts, and delivery schedule for each of the vehicles based on projected future tank quantities" (Mowery: column 2, lines 34-51).

Referring to claim 2. The combination of Kraisser and Mowery further discloses a system wherein the integrated inventory replenishment, scheduling, and routing system includes an algorithm for optimal route generation and an algorithm for optimal delivery day selection, said optimal route generation and optimal delivery day selection algorithms being integrated so as to allow a global optimization with cost trade offs among penalties for running out of the consumable, the costs of multiple trips to delivery the consumable over the long term for an individual customer, and the daily costs of time and miles on the road for executing a route to deliver the consumable to a number of different customers (Kraisser: paragraphs 107 & 112).

Referring to claims 3-4. Claims 3-4 are rejected under the same rationale set forth above as the combination of Kraisser and Mowery discloses methods containing similar limitations to those of the system claims 1-2 (Kraisser: abstract).

Referring to claim 5. The combination of Kraisser and Mowery further discloses a method wherein days on which deliveries can be made are variable so as to increase the number of possible delivery route assignments for a given delivery of a consumable to a customer (Kraisser: paragraph 107).

Referring to claim 6. The combination of Kraisser and Mowery further discloses a method wherein the forecasting step includes the step of creating at least one consumption parameter unique to the customer and a variance term (Kraisser: paragraph 60).

Referring to claim 7. The combination of Kraisser and Mowery further discloses a method comprising the step of assigning priorities to customers to dictate the order in which commercial vehicle capacity is exhausted (Kraisser: paragraph 77).

Referring to claims 8-12. Claims 8-12 are rejected under the same rationale set forth above as the combination of Kraisser and Mowery discloses computer readable mediums containing computer executable instructions with similar limitations to those of the system claims 1-2 and method claims 5-7 (Kraisser: paragraph 19).

Referring to claim 13. Claim 13 is rejected under the same rationale set forth above in the rejection of claim 1. The combination of Kraisser and Mowery further discloses a delivery forecasting system for providing periodically scheduled services (Kraisser: paragraph 82). The examiner notes that Kraisser discloses delivering goods to customers who regularly order a specified amount of goods from a distributor.

Referring to claims 14-18. Claims 14-18 are rejected under the same rationale set forth above in the rejection of claims 1-2 and 13.

Referring to claim 19. The combination of Kraisser and Mowery further discloses a system wherein the delivery forecasting system further provides variable statistical parameters for replenishment of inventory of the consumable, the variable statistical parameters including an expected consumption parameter and an estimate of the variability of the expected consumption parameter (Kraisser: paragraph 77).

Referring to claim 20. The combination of Kraisser and Mowery further discloses a system wherein the variable parameters include a routing horizon over which customers are routed, availability of the commercial delivery vehicle, and a range of allowable days for delivery (Kraisser: paragraph 107).

Referring to claims 21-24. Claims 14-18 are rejected under the same rationale set forth above in the rejection of claims 19-20.

Referring to claims 25-27. The combination of Kraisser and Mowery further discloses systems, methods, and mediums wherein the consumable is gas (Mowery: figure 2 and column 1, lines 17-23). The examiner submits that propane is a type of gas and a predictable result of delivering gas would include delivering propane.

Response to Arguments

The examiner appreciates applicant's consideration of the recommendations made during the interview conducted on April 16, 2008 and agrees that currently amended claims distinguish over the previous prior art, Kraisser. However, applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection, Kraisser in view of Mowery. The Mowery patent was discussed as potential prior art during the interview between the examiner and attorney of record, Michael Dunnam.

Applicant argues that Mowery does not disclose the limitations recited in claim 1 because the historical data of Mowery is available on a daily basis and the forecasting is based on association of a customer to similarly situated customers. The examiner disagrees. There is no recitation in the claims regarding a minimum or maximum frequency of data on customers' inventory of gas. Furthermore, the forecasting is based on individual customer historical profiles (i.e. usage) and risk of inventory depletion. Applicant has not provided any support in the specification for "delivery profiles for similarly situated customers" and given its broadest reasonable meaning the forecasting is based individual customer profiles. Lastly, in response to applicant's arguments against Mowery individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sroub discloses systems and method for optimizing route selection and delivery time.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON B. DUNHAM whose telephone number is (571)272-8109. The examiner can normally be reached on M-F, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Jeff Smith can be reached on 571-272-6763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey A. Smith/
Supervisory Patent Examiner, Art
Unit 3625

JBD
Patent Examiner
7/16/08